

Four new Gall Midges (Dipt.).

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The four species described below, including the representative of a new genus, were reared by Mr. W. H. Patterson, St. Vincent, W. I. Our knowledge of the gall midges of Tropical America is exceedingly fragmentary. Careful collecting and rearing would result in the finding of numerous unknown forms, some of which would doubtless throw much light upon taxonomic questions.

Asphondylia pattersoni n. sp.

This reddish brown midge was reared February 3, 1911, from the flowers of fiddlewood, *Citharexylum quadrangulare*.

Male.—Length, 1.75 mm. Antennae distinctly longer than the body, sparsely haired, light brown; 14 segments, the fifth cylindric, with a length five times its diameter; terminal segment wanting. Palpi: first segment subquadrate, the second with a length three times its diameter, somewhat expanded distally, the third fusiform, slightly curved, as long as the second. Mesonotum reddish-brown, the submedian lines an obscure yellowish. Scutellum yellowish brown, postscutellum fuscous yellowish. Abdomen rather thickly haired, yellowish brown, the basal segments darker, the genitalia slightly darker than the apex of the abdomen. Wings hyaline, costa light brown, the third vein uniting with the margin at the apex of the wing. Femora and tibiae mostly dark brown; claws moderately stout, strongly curved, simple, the pulvilli a little shorter than the claws. Genitalia: basal clasp segment greatly swollen, stout; terminal clasp segment short, greatly swollen, bidentate apically; dorsal plate divided, the lobes orbicular, sparsely setose. Other organs indistinct.

Female.—Length 1.75 mm. Antennae a little shorter than the body, sparsely haired, light brown; 14 segments, the fifth cylindric, with a length about five times its diameter; the thirteenth segment subquadrate, the fourteenth subglobose. Palpi: first segment short, subquadrate, the second subglobose, the third with a length four times its diameter and somewhat dilated. Ovipositor, when extended, about as long as the abdomen, the aciculate portion moderately stout; dorsal pouch apparently represented by an indistinct, thickly setose lobe hardly comparable with the highly developed organ observable in most species of *Asphondylia*.

Type.—Cecid a2132, N. Y. State Museum.

TOXOMYIA n. g.

The unidentate anterior claws and two circumfili indicate a relationship to *Erosomyia* Felt from which it is easily separated by alar characters. The dentate anterior claws prevent the reference to this form to *Contarinia* and the same is true of the genitalia, which latter approach in structure those of *Thecodiplosis*.

Type.—*Toxomyia fungicola* n. sp.

Toxomyia fungicola n. sp.

The small, yellowish midge was reared February 3, 1911, from the teleutospores of *Puccinia* species on *Emilia sonchifolia*.

Male.—Length .75 mm. Antennae twice the length of the body, thickly haired, light brown; 14 segments, the fifth having the two portions of the stem with a length $2\frac{1}{2}$ and $3\frac{1}{2}$ times their respective diameters; the basal enlargement subglobose, the subbasal whorl thick, the circumfilum with long loops, those on the dorsal surface produced to extend beyond the subglobose distal enlargement, which latter has a scattering subbasal whorl of stout setae and a circumfilum with long loops, likewise somewhat produced on the dorsal surface and extending beyond the base of the following segment; distal segment produced, the basal portion of the stem with a length fully seven times its diameter, the distal enlargement subglobose and with a slightly tapering, finger-like process having a length five times its diameter; mouthparts somewhat produced. Palpi: first segment short, subquadrate, the second with a length twice the first, rather slender, the third as long as the second, the fourth a little longer than the third; the entire body a pale yellowish or yellowish red; the genitalia somewhat fuscous. Wings hyaline, costa light straw, subcosta uniting with the margin at the basal third, the third vein a little beyond the apex; the fifth vein uniting with the posterior margin at the distal fourth, its short branch near the basal third. Halteres yellowish transparent, fuscous apically. Legs mostly pale straw, the distal tarsal segments darker; claws long, slender, evenly curved, the anterior unidentate, the pulvilli rudimentary. Genitalia: basal clasp segment moderately long, slender, with a distinct, broadly rounded, setose lobe at the internal basal angle; terminal clasp segment slightly swollen basally, long and evenly curved; dorsal plate short, roundly and triangularly emarginate, the lobes broad, truncate and sparsely setose; ventral plate a little longer, rather broad, triangularly emarginate, the lobes rather stout, slightly diverging and

setose apically; style moderately long, tapering, broadly rounded apically.

Female.—Length .75 mm. Antennae a little longer than the body, thickly haired, dark brown; 14 segments, the fifth with a stem one-third the length of the cylindric basal enlargement, which latter has a length over twice its diameter; subbasal whorl of setae stout and sparse; subapical band scattering; terminal segment produced, the basal enlargement subcylindric, with a length fully four times its diameter and apically a rather stout, finger-like process. Ovipositor short, the terminal lobes narrowly oval, slightly constricted basally and sparsely setose. Other characters nearly as in the male.

Larva.—Length 1.25 mm., rather stout, pale yellowish with pinkish extremities. Head rather long, narrowly triangular, the anterior third chitinized. Antennae rather stout, with a length five times their diameter and arising from distinct elevations; breast-bone wanting. Skin coarsely shagreened, the segments each with a lateral seta near the middle; posterior extremity contracted, the thirteenth segment half the width of the twelfth, the fourteenth about a third narrower than the thirteenth, truncate, with a long seta at each latero-posterior angle and two pairs of submedian short, stout, semi-transparent tubercles at the dorsal extremity.

Type.—Cecid a2134, N. Y. State Museum.

Contarinia lycopersici n. sp.

The species described below was reared February 3, 1911, from the flowers of tomatoes, *Lycopersicum esculentum*. It appears to be allied to *C. solani* Rubs. though there are marked differences in colorational characters, and a comparison with a female specimen of the European form, kindly sent us by Prof. Rubsaamen, shows certain structural differences. The West Indian species has relatively longer and more slender antennal segments.

Male.—Length .75 mm. Antennae twice the length of the body, thickly haired, light brown; 14 segments, the fifth having the basal portion of the stem with a length one-half greater than its diameter, the distal part with a length $2\frac{1}{2}$ times its diameter; basal enlargement subglobose, the subbasal whorl sparse, the loops of the circumfilum long, those on the dorsum produced and extending to the apex of the segment, the distal enlargement slightly produced, broadly oval, with a sparse whorl of setae and a similar circumfilum, the loops of the latter extending to the tip of the basal enlargement on the following seg-

ment; terminal segment produced, the basal portion of the stem with a length four times its diameter, the distal enlargement fusiform, with a length nearly three times its diameter and apically with a long, finger-like process. Palpi: first segment short, subquadrate, the second narrowly oval, with a length about twice its diameter, the third one-half longer than the second, more slender, the fourth a little longer and more slender than the third. Mesonotum reddish brown, the submedian lines yellowish. Scutellum and postscutellum fuscous yellowish. Abdomen mostly fuscous yellowish. Wings hyaline or nearly so. Halteres yellowish transparent, fuscous apically. Legs mostly dark brown, the basal third of the tibiae, especially those of the posterior legs, yellowish; claws long, slender, evenly curved, the pulvilli a little shorter than the claws. Genitalia: basal clasp segment rather long, stout; terminal clasp segment stout, tapering; dorsal plate rather long, deeply and roundly emarginate, the lobes diverging, sparsely rounded; ventral plate deeply and triangularly incised, the lobes diverging, tapering, both sparsely setose; style short, tapering, acute.

Female.—Length 1 mm. Antennae nearly as long as the body, rather thickly haired, dark brown; 14 segments, the fifth with a stem one-quarter the length of the cylindric basal enlargement, which latter has a length $2\frac{1}{2}$ times its diameter; subbasal whorl sparse, subapical band rather long, the setae long and strongly curved; terminal segment produced, with a length four times its diameter and apically with a rather stout process, having a length fully twice its diameter. Palpi: first segment subquadrate, the second narrowly oval, with a length twice its diameter, the third a little longer and more slender than the second, the fourth longer and more slender than the third. Mesonotum reddish brown, the submedian lines yellowish. Scutellum reddish brown, postscutellum probably darker. Abdomen dark brown. Wings subhyaline, with rather distinct fuscous spots on costa and at the posterior margin near the basal third, at the distal fifth on the third vein and on the posterior branch of the fifth, some specimens showing a rather indistinct fuscous band near the distal fifth of the wing. Ovipositor, when extended, distinctly longer than the body; terminal lobes very slender, with a length five times the diameter and sparsely setose.

Larva.—Length 1.5 mm., yellowish white, rather stout. Head small; antennae short, stout; breast-bone with a subquadrate head, bidentate; the short, obliquely truncate, blunt teeth widely separated, yellowish brown, the remainder of this structure semi-transparent, the shaft being slender. Skin nearly smooth, posterior extremity broadly rounded.

Type.—Cecid a2135 and a2090, N. Y. State Museum.

Hyperdiplosis coffeae n. sp.

The midge described below was reared February 3, 1911, from the fruits of the Liberian coffee tree, *Coffea liberica*. It is tentatively referred to this genus, since the claws are less strongly bent, while the circumfili are more produced than in other species placed in this group.

Male.—Length 1 mm. Antennae nearly twice the length of the body, thickly haired, light brown: 14 segments, the fifth having the two portions of the stem, each with a length about thrice the diameter; the basal enlargement subglobose, the subbasal whorl rather thick, stout, the circumfilum with loops extending to the produced distal enlargement, which latter has a length twice its diameter, a sparse whorl of rather long setae, subbasal and subapical circumfili, the loops of the latter extending to the apex of the segment; terminal segment produced, the basal portion of the stem with a length four times its diameter, the distal enlargement subcylindric, tapering distally and with a length four times its diameter and apically a long, finger-like process with a length four times its diameter and subacute distally. Palpi: first segment probably subquadrate, the second slender, with a length four times its diameter, the third a little longer than the second, more slender; the fourth as long as the third, dilated; eyes large, black. Entire body a pale yellowish. Wings yellowish white, costa very pale yellowish, the third vein uniting with the margin well beyond the apex of the wing. Halteres whitish transparent. Legs mostly a light straw, the distal tarsal segments darker; claws stout, strongly bent and swollen subapically, simple, the pulvilli shorter than the claws. Genitalia: basal clasp segment short, stout, obliquely truncate; terminal clasp segment as long as the basal clasp segment, swollen basally, curved; dorsal plate nearly as long as the ventral plate, triangularly incised, the lobes obliquely emarginate and sparsely setose; ventral plate long, broad, very deeply and roundly emarginate, the slender lobes diverging, narrowly rounded and sparsely setose apically; style long, stout, broadly rounded.

Female.—Length 1 mm. Antennae about as long as the body, thickly haired, yellowish brown; 14 segments, the fifth with a stem about three-quarters the length of the cylindric basal enlargement, which latter has a length thrice its diameter; subbasal whorl sparse, the subapical band thick, the setae long and strongly curved; terminal segment produced, the basal enlargement subcylindric, with a length four times its diameter and apically with a long, finger-like process. Ovipositor short, the terminal lobes narrowly lanceolate and sparsely setose. Other characters nearly as in the male.

Type.—Cecid 22133, N. Y. State Museum.